



**Engineering Statement**  
**of**  
**John F.X. Browne, P.E.**  
**in support of**  
**Minor Amendment to Pending Application**  
**for Construction Permit**  
**WAGT-DT**  
**Augusta, GA**

**Background**

This statement is being submitted in support of a minor amendment to a pending application for a construction permit that has been filed by WAGT, Inc. for Channel 30 DTV serving Augusta, GA (BPCDT-19990921AAR). The original application requested an ERP of 200 kW. WAGT, Inc. now seeks an ERP of 400 kW. The proposed antenna will be used by both NTSC (WAGT-TV) and DTV stations. Since the length of this antenna is different, the overall height of the structure will be reduced from 476 meters to 468 meters. The (rounded) height of the radiation center above ground and the height of the radiation center above average terrain also change from 461 meters to 458 meters, and from 485 meters to 482 meters, respectively. The electrical beam tilt changes from 0.75° to 0.8°.

### **Maximum ERP**

This application proposes to increase the effective radiated power to 400 kW. An omnidirectional antenna (Dielectric Model TUP-04-16 / 64H-1-T) is proposed at an HAAT of 482 meters. The F(50,90) 41 dBu contour encompasses the entire principal city with these parameters.

### **Interference Study**

Studies were made using Probe™ software to determine whether any new interference would result from operating at the proposed ERP with the proposed omnidirectional antenna. A study was performed using the allotment parameters; a study was also performed at the proposed 400 kW ERP omnidirectional parameters. The results of the studies indicate increased interference to the following:

<u>Station</u>	<u>Location</u>	<u>Channel</u>	<u>New Interference in Population</u>	<u>% Increase</u>
WPBA-TV	Atlanta, GA	30	11,784 persons	0.40
WNSC-TV	Rock Hill, SC	30	13,599 persons	1.35
WFXL-DT	Albany, GA	30	35 persons	0.01

These increases would be in compliance with the Commission's Rules as they do not increase interference by more than 2% to any station nor would any station receive an aggregate of more than 10% interference.



### **Antenna**

A Dielectric Model TUP-04-16-1 / 64H-1-T is proposed; this antenna has an omnidirectional pattern. An electrical beam tilt of  $0.8^\circ$  is proposed.

### **Radio Frequency Radiation**

The proposed site is the existing site of WAGT-TV. The RFR contribution of the proposed DTV facility has been calculated to be less than  $0.000157 \text{ mW/cm}^2$  at any ground level location. This calculation is based on the total DTV power in the 6 MHz bandwidth and an ERP adjusted in consideration of the antenna elevation pattern characteristics in accordance with OET-65. The RFR intensity excludes it from further consideration as it is less than 0.2% of the allowable MPE for public / uncontrolled area scenarios at this frequency. The sum of the ratios of RFR levels to MPE's for both NTSC and DTV facilities is less than 0.01 (1%).

There is, however, some possibility for exposure to RFR exceeding the occupational / controlled area MPE limits for workers on the tower structure. In order to assure a compliant environment, precautions will be taken to keep workers at least 25 meters below the new DTV antenna where the combined radiation from the existing NTSC facility and the new DTV facility will be less than the occupational MPE's for these frequencies.

The tower base is fenced to limit access and appropriate signage is in-place to advise of the potential RFR hazard on the structure.

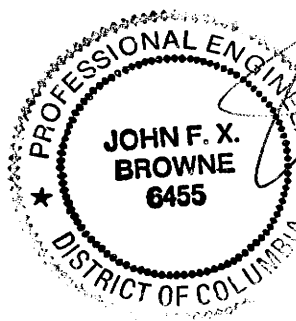
The applicant will cooperate with other users to reduce power as necessary to produce a compliant environment when workers must be on the tower.

**FAA / Tower Registration**

The proposed antenna will replace the existing NTSC antenna on the existing tower and will reduce the overall height of the structure. The FAA will be notified and the FCC Antenna Structure Registration will be modified accordingly. (Existing Reg. No. 1019723)

**Certification**

This statement was prepared by me or under my direction. All assertions contained in the statement are true of my own personal knowledge except where otherwise indicated and these latter assertions are based on information from sources known to be reliable and are believed to be true.



*John F. X. Browne*  
John F.X. Browne, P.E.  
January 19m 2001